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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,400	03/01/2002	Anthony C. Bonora	ASYS8196US0 MEM/SDS	6253
33864	7590	04/23/2004	EXAMINER	
O'MELVENY & MYERS, LLP 275 BATTERY STREET SUITE 2600 SAN FRANCISCO, CA 94111-3305			BRAHAN, THOMAS J	
			ART UNIT	PAPER NUMBER
			3652	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/087,400

**Applicant(s)**

BONORA ET AL.

**Examiner**

Thomas J. Brahan

**Art Unit**

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-8,11,13,15 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,11,13,15 and 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Appropriate correction is required. Claim 1 has been amended to recite that a base is mounted to the carriage, and that a support column extends of the base. The claim also specifies a z-axis drive housing with another base and an elongate body and a radial drive housing. The specification fails to include language discussing these features. The specification also fails to discuss the other claimed housings, the bore in the base, and that the rotational drive rotates (itself), as now in the amended claims.

2. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which applicant regards as his invention.

3. Claims 1, 3-8, 11, 13 and 19-23 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. It is unclear as to how the applicant is considering the claimed apparatus as having the rotational drive housed within a base and a support column extending out of this base, as now recited in claim 1 and in new claim 19. The theta motor (362) is shown as mounted below (not within) the only element which can be considered as a base with a column extending therefrom.

b. Claim 3 is incomplete as depending from cancelled claim 2. Claim 3 has not been further treated on the merits.

c. It is unclear as to how the applicant is considering the claimed apparatus as having a rotational drive seated within a bore, as recited in line 6 of claim 11, as the disclosure has it below the base without specifying a seating. It is also unclear as to how the applicant is considering the apparatus as having "the rotational drive adapted to rotate about a longitudinal central axis of said rotational drive" as now recited in claim 11. It does not appear as though the rotational drive itself rotates, only the column (364) above it.

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

5. Claims 1, 3-6 and 11-15, as best understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaegashi et al in view of Ohtani et al. Figure 7 of Yaegashi et al shows a wafer engine for transporting wafers, comprising a rotational drive (74) with a theta axis, a z-axis drive housing having an elongated vertical body (71) and a base portion (79) extending substantially perpendicular from the elongated vertical body, the z-axis drive housing containing a z-axis drive assembly (belt 82 and its connection to transfer member 73) adapted to move within the elongated vertical body along a linear path, the linear path defining a z-axis that is offset from and substantially parallel to the theta-axis, a support column (at motor 74) adapted to rotate about the theta-axis, a radial drive housing (77) removably mounted to the z-axis drive assembly, the radial drive housing containing a radial drive assembly adapted to move between a first and a second position with the radial drive housing along a third linear path, the linear path defining a radial axis, and an end effector (78) mounted to the radial drive assembly. Yaegashi et al varies from the claims by having the wafer engine fixedly mounted instead of having it mounted on a linearly moving carriage. Ohtani et al shows a similar wafer engine mounted on a linear track (31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wafer engine of Yaegashi et al by mounting it on a carriage, as to have moving on a carriage for servicing more processing chambers, as taught by Ohtani et al.

6. Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaegashi et al in view of Solomon et al. Yaegashi et al shows a wafer engine for transporting wafers having a slide body (77) enclosing means for providing linear motion for an end effector (78a) along a first horizontal path, means (82) for moving the slide body along a second vertical path, means (74) for rotating the slide body, and a fan unit (96) for drawing air through (into and out of) the slide body. It varies from claim 15 because the fan unit does not have a filter. Solomon et al shows a similar wafer apparatus with airflow through the gripper arms and having filters (170, 172). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the fan unit of Yaegashi et al with a filter, to clean the air flow, as taught by Solomon et al.

7. Claims 7 and 13, as best understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaegashi et al in view of Ohtani et al, as applied above to claim 1, and further in view of Hugues et al. Yaegashi et al, as modified, shows the basic claimed wafer engine, but varies from claims 7 and 13 by not having a tool from the list of an ID reader, a metrology tool, an aligner, a notch detector, an edge detector or a wafer marking tool on its radial drive housing. Hugues et al shows a similar wafer apparatus with alignment and monitoring sensors (111 and 113) on its end effector housing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the end effectors of Yaegashi et al by providing their housings with sensors, to monitor the positioning of the wafers during conveying, as taught by Hugues et al.


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8. Claims 8 and 19-23, as best understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaegashi et al in view of Ohtani et al, as applied above to claim 1, and further in view of Solomon et al. Yaegashi et al, as modified, shows the basic claimed wafer engine, but varies from the claims by not having a filter for its fan units. Solomon et al shows a similar wafer apparatus with airflow units having filters (170, 172). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the fan units of Yaegashi et al with filters, to clean the air flow, as taught by Solomon et al.

9. Applicant argues in the amendment filed January 23, 2004, that the reference of Yaegashi et al teaches away from having a wafer engine mounted for linear movement as its wafer engine is stationary. However similar wafer engines are shown in the art as being mounted on linear carriages as to increase their working range. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. An inquiry concerning this communication should be directed to Thomas J. Braham at telephone number (703) 308-2568. The examiner's supervisor, Ms. Eileen Lillis, can be reached at (703) 308-3248. The fax number for all patent applications is (703) 872-9306.

  
Thomas J. Braham  
Primary Examiner  
Art Unit 3652